RAW SEQUENCE LISTING

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) no errors detected.

Application Serial Number: _10/554,386_

Source: _P4/10_

Date Processed by STIC: _11/1/05_

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PCT

RAW SEQUENCE LISTING   DATE: 11/01/2005
PATENT APPLICATION: US/10/554,386 TIME: 10:58:39

Input Set : **A:\EP04-001C-USpatentin.txt**
Output Set: **N:\CRF4\11012005\J554386.raw**

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   3 <110> APPLICANT: EXELIXIS PLANT SCIENCES, INC.
   5 <120> TITLE OF INVENTION: GENES UPREGULATED IN A TOMATO PLANT HAVING AN INCREASED
   6       ANTHOCYANIN CONTENT PHENOTYPE
   8 <130> FILE REFERENCE: EP04-001C-US
C--> 10 <140> CURRENT APPLICATION NUMBER: US/10/554,386
C--> 10 <141> CURRENT FILING DATE: 2005-10-25
  10 <150> PRIOR APPLICATION NUMBER: US 60/465,605
  11 <151> PRIOR FILING DATE: 2003-04-25
  13 <160> NUMBER OF SEQ ID NOS: 12
  15 <170> SOFTWARE: PatentIn version 3.2
  17 <210> SEQ ID NO: 1
  18 <211> LENGTH: 1675
  19 <212> TYPE: DNA
  20 <213> ORGANISM: Lycopersicon esculentum
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  25 ctactccggc tccggcgaac gcaacgacct tatcggggcg gacggggact accgtccggc    120
  27 gaaaagtaca aaggattggt gggcaatttt ctgtgtggag acattgaaac tgtggagaat    180
  29 tggaggtcct atagcattca acataatctg ccaatatgga gtgaattctc ttacaaatat    240
  31 atttgttgga catcttggaa atgttgagct ctctgctatt tctattgctc agactgttat    300
  33 tagtactttt tcttttggct tcatgatggg aatgggtagt gcattggaga cactatgtgg    360
  35 ccaggcatat ggagcagggc aagttcacat gttgggcgtt tatatgcaac gatccatcat    420
  37 aatcctgcta gctacttgtg tctttctatt gcccatttac ttattcacca ctccacttct    480
  39 cgtgttgcta ggccaagaaa ctgcaatagc ggacctctct ggaagatata ccatgttact    540
  41 catcccacag ttgttttcac ttgctatcaa ttttcctact tccaaatttc ttcaagctca    600
  43 gagtaaagtg gatgttctcg ctgggattgg attcgcagct gtgctggtgc acgctttgtt    660
  45 cctctggctc tttatatata cacttgaatg gggtactaat ggtgctgcta tagcctttga    720
  47 cctcacgaat tggcttactg cgatggctca attagcatac gttgttggat ggtgtaagga    780
  49 tgggtggaaa gggttgtcgt ggtcagcgtt caatgagatt tgggcattcg tgagactttc    840
  51 tattgcttca gctgttatgt tatgccttga gatttggtac atgatgagta ttattctcct    900
  53 tgttggccat cttaacaacg ccgtcatagc agttggctcc atttcaattt gtatgaacat    960
  55 caatggatgg gagagcatgc ttttcattgg aattaatgct gccataagca tccgagtctc   1020
  57 aaatgaactg gggcaaggac atccaagagc taccaaatac tcggtctaca tcacggtgtt   1080
  59 tcagtccctc ctaatagggg tactctgcat ggtaattgta ctagtagcta gagatcatct   1140
  61 ggccattatc ttttcaaaca gcaaggagat gcaagaagct gttgctgatc ttgcttacct   1200
  63 tctagggatt accatggtcc ttaatagcgt tcagccggtt atatcagggg ttgctgttgg   1260
  65 aggtggatgg caagctttag tagcttatat caatcttggt tgctattatg tttttggact   1320
  67 ccctcttgga tatcttcttg gttatgtagc aaaattagga acaaagggac tttggttagg   1380
  69 gatgatagca ggggcagctt tgcagactct tctactcttg attatactgt ataagactaa   1440
  71 ctggaacaag gaggttaacg acacgacgga gcgtatgcgc aagtggggag tcaagatttt   1500
  73 tgagacacag aaatctgcag atgggcagtt aactattgag aatggtggtg ttgcttaagt   1560
  75 ttatgattga ttcattgaaa taatgtattt tttcttgttt atgtttgagt ttgaaacttg   1620
  77 taaaatctgt ttcttttgtt atacactcag caatagaaac gtgggttttc caatt         1675
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81 <211> LENGTH: 506
82 <212> TYPE: PRT
83 <213> ORGANISM: Lycopersicon esculentum
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91 Asp Leu Ile Gly Ala Asp Gly Asp Tyr Arg Pro Ala Lys Ser Thr Lys
92              20                  25                  30
95 Asp Trp Trp Ala Ile Phe Cys Val Glu Thr Leu Lys Leu Trp Arg Ile
96          35                  40                  45
99 Gly Gly Pro Ile Ala Phe Asn Ile Ile Cys Gln Tyr Gly Val Asn Ser
100     50                  55                  60
103 Leu Thr Asn Ile Phe Val Gly His Leu Gly Asn Val Glu Leu Ser Ala
104 65                  70                  75                  80
107 Ile Ser Ile Ala Gln Thr Val Ile Ser Thr Phe Ser Phe Gly Phe Met
108              85                  90                  95
111 Met Gly Met Gly Ser Ala Leu Glu Thr Leu Cys Gly Gln Ala Tyr Gly
112             100                 105                 110
115 Ala Gly Gln Val His Met Leu Gly Val Tyr Met Gln Arg Ser Ile Ile
116         115                 120                 125
119 Ile Leu Leu Ala Thr Cys Val Phe Leu Leu Pro Ile Tyr Leu Phe Thr
120         130                 135                 140
123 Thr Pro Leu Leu Val Leu Leu Gly Gln Glu Thr Ala Ile Ala Asp Leu
124 145                 150                 155                 160
127 Ser Gly Arg Tyr Thr Met Leu Leu Ile Pro Gln Leu Phe Ser Leu Ala
128             165                 170                 175
131 Ile Asn Phe Pro Thr Ser Lys Phe Leu Gln Ala Gln Ser Lys Val Asp
132             180                 185                 190
135 Val Leu Ala Gly Ile Gly Phe Ala Ala Val Leu Val His Ala Leu Phe
136         195                 200                 205
139 Leu Trp Leu Phe Ile Tyr Thr Leu Glu Trp Gly Thr Asn Gly Ala Ala
140     210                 215                 220
143 Ile Ala Phe Asp Leu Thr Asn Trp Leu Thr Ala Met Ala Gln Leu Ala
144 225                 230                 235                 240
147 Tyr Val Val Gly Trp Cys Lys Asp Gly Trp Lys Gly Leu Ser Trp Ser
148             245                 250                 255
151 Ala Phe Asn Glu Ile Trp Ala Phe Val Arg Leu Ser Ile Ala Ser Ala
152             260                 265                 270
155 Val Met Leu Cys Leu Glu Ile Trp Tyr Met Met Ser Ile Ile Leu Leu
156         275                 280                 285
159 Val Gly His Leu Asn Asn Ala Val Ile Ala Val Gly Ser Ile Ser Ile
160     290                 295                 300
163 Cys Met Asn Ile Asn Gly Trp Glu Ser Met Leu Phe Ile Gly Ile Asn
164 305                 310                 315                 320
167 Ala Ala Ile Ser Ile Arg Val Ser Asn Glu Leu Gly Gln Gly His Pro
168             325                 330                 335
171 Arg Ala Thr Lys Tyr Ser Val Tyr Ile Thr Val Phe Gln Ser Leu Leu
172             340                 345                 350
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175 Ile Gly Ile Leu Cys Met Val Ile Val Leu Val Ala Arg Asp His Leu
176         355             360             365
179 Ala Ile Ile Phe Ser Asn Ser Lys Glu Met Gln Glu Ala Val Ala Asp
180     370             375             380
183 Leu Ala Tyr Leu Leu Gly Ile Thr Met Val Leu Asn Ser Val Gln Pro
184 385             390             395             400
187 Val Ile Ser Gly Val Ala Val Gly Gly Gly Trp Gln Ala Leu Val Ala
188             405             410             415
191 Tyr Ile Asn Leu Gly Cys Tyr Tyr Val Phe Gly Leu Pro Leu Gly Tyr
192         420             425             430
195 Leu Leu Gly Tyr Val Ala Lys Leu Gly Thr Lys Gly Leu Trp Leu Gly
196         435             440             445
199 Met Ile Ala Gly Ala Ala Leu Gln Thr Leu Leu Leu Leu Ile Ile Leu
200     450             455             460
203 Tyr Lys Thr Asn Trp Asn Lys Glu Val Asn Asp Thr Thr Glu Arg Met
204 465             470             475             480
207 Arg Lys Trp Gly Gly Gln Asp Phe Glu Thr Gln Lys Ser Ala Asp Gly
208             485             490             495
211 Gln Leu Thr Ile Glu Asn Gly Gly Val Ala
212         500             505
215 <210> SEQ ID NO: 3
216 <211> LENGTH: 1067
217 <212> TYPE: DNA
218 <213> ORGANISM: Lycopersicon esculentum
220 <400> SEQUENCE: 3
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223 ttcatatata gctatcttcc tctttgccta taaacaataa tcagtgtaaa aatgccaacc     120
225 accatggaag atgtcactgc caagattgat gcagttgaaa tcgactccaa gagtgttgtt     180
227 gctctgaagg agaaggcgat cgaaggtgaa gtaaagacta cagaaacaac acaagagaag     240
229 actaatgaag ctaaaagtaa tccggagaaa gaatccaatg gtgcaacttt caaagaagag     300
231 gaagttccag ttgaggttga acctaaaact ggagtctctt ttcctgtcaa acttgaagat     360
233 ggaaagcagt tgaaagctgt aggtttaagg aagaagagca tgcttggcat gggcatcaaa     420
235 atctatggct ttggaatata tgcagacaat gagaaattga aagacctcat gcagtccaag     480
237 attgcgaaag caccagcaaa accaacaaag gagatgtatc aaatggtgat tgatagtgat     540
239 ttgggaatga tgatgcggtt ggtaattgtt ttctctaacc taaccatgaa catggtaaga     600
241 aagaactttg acgaaggcct cggagctgcc atcaagaagc ttacaggtgg aaagaatgag     660
243 gagctcacaa agaagatcat gggagaagca tctgatgaca taaagctgaa ttctggttct     720
245 gtaattgaga tttcaaggct tccaggatat gtccttcaga ccaaagtaaa gggtgagatt     780
247 gtgagcaagg tggaaagtga actactctgc agggccttca tctacatgta tttaggtgat     840
249 gatccatttg acaaagaagc caaggagaag ttcgggacat ccatgctctc tctgttttaa     900
251 gtagtaggtt tccagcattt actagtctag gttgttaaag aataagctgt ggtgactttg     960
253 aactgatgaa taatagctca ataaaagcat ggttgatttt caaaaaaaaa aaaaaaaaa    1020
255 aaaaaaaaaa aagtacctgc ccgggcggcc gctcgaaagc cgaattc              1067
258 <210> SEQ ID NO: 4
259 <211> LENGTH: 250
260 <212> TYPE: PRT
261 <213> ORGANISM: Lycopersicon esculentum
263 <400> SEQUENCE: 4
265 Met Pro Thr Thr Met Glu Asp Val Thr Ala Lys Ile Asp Ala Val Glu
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Input Set : A:\EP04-001C-USpatentin.txt
Output Set: N:\CRF4\11012005\J554386.raw

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269 Ile Asp Ser Lys Ser Val Val Ala Leu Lys Glu Lys Ala Ile Glu Gly
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273 Glu Val Lys Thr Thr Glu Thr Thr Gln Glu Lys Thr Asn Glu Ala Lys
274          35                    40                    45
277 Ser Asn Pro Glu Lys Glu Ser Asn Gly Ala Thr Phe Lys Glu Glu Glu
278      50                    55                    60
281 Val Pro Val Glu Val Glu Pro Lys Thr Gly Val Ser Phe Pro Val Lys
282 65                    70                    75                    80
285 Leu Glu Asp Gly Lys Gln Leu Lys Ala Val Gly Leu Arg Lys Lys Ser
286              85                    90                    95
289 Met Leu Gly Met Gly Ile Lys Ile Tyr Gly Phe Gly Ile Tyr Ala Asp
290              100                   105                   110
293 Asn Glu Lys Leu Lys Asp Leu Met Gln Ser Lys Ile Ala Lys Ala Pro
294          115                   120                   125
297 Ala Lys Pro Thr Lys Glu Met Tyr Gln Met Val Ile Asp Ser Asp Leu
298      130                   135                   140
301 Gly Met Met Met Arg Leu Val Ile Val Phe Ser Asn Leu Thr Met Asn
302 145                   150                   155                   160
305 Met Val Arg Lys Asn Phe Asp Glu Gly Leu Gly Ala Ala Ile Lys Lys
306              165                   170                   175
309 Leu Thr Gly Gly Lys Asn Glu Glu Leu Thr Lys Lys Ile Met Gly Glu
310              180                   185                   190
313 Ala Ser Asp Asp Ile Lys Leu Asn Ser Gly Ser Val Ile Glu Ile Ser
314          195                   200                   205
317 Arg Leu Pro Gly Tyr Val Leu Gln Thr Lys Val Lys Gly Glu Ile Val
318      210                   215                   220
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322 225                   230                   235                   240
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326              245                   250
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330 <211> LENGTH: 365
331 <212> TYPE: DNA
332 <213> ORGANISM: Lycopersicon esculentum
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337 gcaattcagc taatgtttgc agaggtgcag atgttaacgc cagtagtggg gacgagagaa     120
339 gtgtattttg tgagatattg caaacaaatg agtgcagcac agtgggggat tgtggatgtt     180
341 tctgtcgaca aagttgaagc cagcattgac gcttctctcc ttaaatgcag aaaattaccc     240
343 tcaggatgca ttctacaaga acaatccaat gcacattgca aggtgacgtg ggtggaacac     300
345 ttggagtgcc aaaaaaacat agtggactct ctgtacctcg gccgcgacca cgctaagccg     360
347 aattc                                                                 365
350 <210> SEQ ID NO: 6
351 <211> LENGTH: 450
352 <212> TYPE: DNA
353 <213> ORGANISM: Lycopersicon esculentum
355 <400> SEQUENCE: 6
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358 agtgaaagtg tatggttcag caatggctgc atgtccacaa agggtcatgg tttgtcttat    120
360 agaattggga gtcgattatg aacttataca tgttgatctt gattctctcc agcagaaaaa    180
362 acctgatttc ttgcttttac aggtaatatt ttagttgtcg cttttaactt atcaaaagaa    240
364 aatcatattt actcataaca ttaattactt atgcttcgaa tcgctttgtt atatattctt    300
366 gcagccattt ggacaggttc ctgtcattga agagggcgat ttcaggcttt tcggtaacta    360
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374 <211> LENGTH: 448
375 <212> TYPE: DNA
376 <213> ORGANISM: Lycopersicon esculentum
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383 gggcgtttat atgcaacgat ccatcataat cctgctagct acttgtgtct ttctattgcc    180
385 catttactta ttcaccactc cacttctcgt gttgctaggc caagaaactg caatagcgga    240
387 cctctctgga agatatacca tgttactcat cccacagttg ttttcacttg ctatcaattt    300
389 tcctacttcc aaatttcttc aagctcagag taaagtggat gttctcgctg ggattggatt    360
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397 <211> LENGTH: 1067
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399 <213> ORGANISM: Lycopersicon esculentum
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404 ttcatatata gctatcttcc tctttgccta taaacaataa tcagtgtaaa aatgccaacc    120
406 accatggaag atgtcactgc caagattgat gcagttgaaa tcgactccaa gagtgttgtt    180
408 gctctgaagg agaaggcgat cgaaggtgaa gtaaagacta cagaaacaac acaagagaag    240
410 actaatgaag ctaaaagtaa tccggagaaa gaatccaatg gtgcaacttt caaagaagag    300
412 gaagttccag ttgaggttga acctaaaact ggagtctctt ttcctgtcaa acttgaagat    360
414 ggaaagcagt tgaaagctgt aggtttaagg aagaagagca tgcttggcat gggcatcaaa    420
416 atctatggct ttggaatata tgcagacaat gagaaattga aagacctcat gcagtccaag    480
418 attgcgaaag caccagcaaa accaacaaag gagatgtatc aaatggtgat tgatagtgat    540
420 ttgggaatga tgatgcggtt ggtaattgtt ttctctaacc taaccatgaa catggtaaga    600
422 aagaactttg acgaaggcct cggagctgcc atcaagaagc ttacaggtgg aaagaatgag    660
424 gagctcacaa agaagatcat gggagaagca tctgatgaca taaagctgaa ttctggttct    720
426 gtaattgaga tttcaaggct tccaggatat gtccttcaga ccaaagtaaa gggtgagatt    780
428 gtgagcaagg tggaaagtga actactctgc agggccttca tctacatgta tttaggtgat    840
430 gatccatttg acaaagaagc caaggagaag ttcgggacat ccatgctctc tctgttttaa    900
432 gtagtaggtt tccagcattt actagtctag gttgttaaag aataagctgt ggtgactttg    960
434 aactgatgaa taatagctca ataaaagcat ggttgatttt caaaaaaaaa aaaaaaaaa    1020
436 aaaaaaaaaa aagtacctgc ccgggcggcc gctcgaaagc cgaattc                 1067
439 <210> SEQ ID NO: 9
440 <211> LENGTH: 632
441 <212> TYPE: DNA
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RAW SEQUENCE LISTING ERROR SUMMARY   DATE: 11/01/2005
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Output Set: **N:\CRF4\11012005\J554386.raw**

<u>Please Note:</u>
Use of n and/or Xaa have been detected in the Sequence Listing. Please review the
Sequence Listing to ensure that a corresponding explanation is presented in the <220>
to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:11; N Pos. 712,713,714,752,758,801,811,827

VERIFICATION SUMMARY   DATE: 11/01/2005
PATENT APPLICATION: US/10/554,386   TIME: 10:58:40

Input Set : **A:\EP04-001C-USpatentin.txt**
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L:10 M:270 C: Current Application Number differs, Replaced Current Application No
L:10 M:271 C: Current Filing Date differs, Replaced Current Filing Date
L:548 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:11 after pos.:660
L:550 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:11 after pos.:720
L:552 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:11 after pos.:780
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